



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

The genus *Usnea* and its Linnaean nomenclature

R. HEBER HOWE, JR.

When I published my paper on the North American *Usneas* (Bull. Torrey Club 37: 1-18. 1910) the International Botanical Congress had not accepted Linnaeus' *Species Plantarum* of 1753 as a starting point for lichenological nomenclature. This adoption having been settled upon in May of the present year, it seems well worth while to fix the disposition of Linnaean names in this genus, in fact as soon as possible in all genera.

With the adoption of *Species Plantarum* is opened perhaps the necessity of referring to the Linnaean herbarium for type material, a matter needing a word of explanation. In 1886 Wainio (Meddel. Soc. Fauna et Flora Fenn. 14: 1-10) published an account of the material found in the Linnaean herbarium,* showing that a large number of the lichen species were either not represented at all (45 out of 80) or were compositely shown by several species. It seems quite clear that although Linnaeus referred almost always (13 exceptions) to the figures and descriptions of Dillenius, yet in Linnaeus' own collection the species were poorly represented and authentic material rare. Crombie has given us a careful report on the Dillenian herbarium, in which he found a much greater percentage of species, properly represented and figured in the author's *Historia Muscorum*, than Wainio did in Linnaeus' collections and work. We must therefore not put too much weight on the supposed Linnaean "types," of which Linnaeus himself makes no definite mention,† but must take Linnaeus' original descriptions for what they are worth, and supplement them with

*To most of the specimens specific names had been ascribed by Linnaeus himself. The numbers of the same specimens, either alone or placed before the names, which were likewise written by Linnaeus himself, refer to his *Species Plantarum* (1753) and the numbers enclosed in parenthesis to *Flora Suecica*. But to many specimens names were ascribed by authorities after Linnaeus' time, such as Smith, Dickson, Swartz. [Translation of a part of Wainio's preface.]

†"It has happened that I have come into possession of no slight collection." [Translation from preface of *Tomus I.*]

the Dillenian figures to which he refers, and the Dillenian specimens on which the figures were based. It seems to me clear that as Linnaeus made no definite mention of "types" the specimens preserved in his collection cannot constitute such in the strict sense of the word, but simply may be used when possible as confirmative evidence.

Linnaeus appears to have largely given the binomial nomenclature to the results of Dillenius' labor, though to Dillenius in his preface he gives faint praise.

No. 71, *Lichen plicatus*, being the first species of Linnaeus, now included in the genus (p. 1154) becomes, according to some botanists,* the "type" of the genus *Usnea* (Dill.) Adans. No number 71 was found by Wainio, but he states that no. 457 of Flora Lapponica, cited by Linnaeus in the Species Plantarum = "*Alectoria ochroleuca* (Ehrh.) Nyl. (= *rigida* Th. Fr., Lich. Scand. p. 19)—Ad hanc plantam igitur *Lichen plicatus* L., Spec. Plant. (1753) p. 1154 n. 71, spectat." Now in the Species Plantarum Linnaeus cites first no. 984 of the Flora Suecica and diagnoses it as follows: "filamentosus pendulus, ramis implexis, scutellis radiatis." These last words leave no doubt as to the plant described being an *Usnea* and not an *Alectoria*. Secondly, he cites no. 457 of the Flora Lapponica, an *Alectoria*, as above proven, and there is nothing in the description to imply otherwise. Thirdly, he cites Dillenius and his figure, which, as I have already pointed out (*loc. cit.*), is according to Crombie *Usnea ceratina* Ach. (Lich. Univ. 619. 1810)—the name of Acharius becoming a synonym of *plicata* as also noted. His fourth reference is to Bauhin, whose description is too indefinite for consideration.

From the above it would seem that with no definite "type" specimen in existence, with an absolutely diagnostic description standing first on the page, and with also a reference to a recognizable figure, based on an existing specimen, the species *Lichen plicatus* would properly remain an *Usnea*. The coarsest of the pendulous Usneas, later renamed *ceratina* by Acharius, must therefore stand today as *Usnea plicata* (L.) Web. The "type" locality is "Europae & Americae borealis." The fact that one of the refer-

*A code of botanical nomenclature. Bull. Torrey Club 31: 249-261. 1904.

ences, the second, refers to an *Alectoria*, does not invalidate the name or embarrass the situation.

No. 72, *Lichen barbatus*, was found by Wainio to be represented in the Linnaean herbarium by a specimen referable to "*Usnea articulata* Hoffm." Hoffmann, however, himself referred* to Dillenius' figure (*pl. 11. f. 4*), which is of typical *articulata* as we now understand the species, and the one referred to by Linnaeus under the latter's *articulatus*; whereas Hoffmann under his own *barbata* referred to Dillenius' figure (*pl. 12. f. 6*), again following Linnaeus. There seems no doubt that Linnaeus' original description of the 1753 edition, copied from his *Flora Suecica*, no. 985,† did not refer to his no. 79, *Lichen articulatus*, of the 1753 work, and that we must turn to his Dillenian reference (the third) and leave it to the only plate cited to settle the question. This plate we have already found, was, according to Crombie, of an existing specimen referable to "*Usnea dasy[o]poga* (Ach.)" for which the name *barbata* must stand. The "type" locality given is also very significant. It has been my opinion that *Lichen barbatus* (= *Usnea barbata* d. *dasyopoga* Fr.) represents a subspecific rather than a specific distinction, and I therefore proposed the combination *Usnea plicata barbata* (L.) R. H. Howe, Jr. No doubt some will prefer to claim for it specific rank, and for many nomenclatural reasons this would be the best elucidation.

No. 77, *Lichen hirtus*, Wainio tells us, has a composite representation in the Linnaean herbarium. He writes "77. *Lichen hirtus* (984) = *Usnea barbata* var. *glabrescens* Nyl. in Wainio, *Lich. Vib.* p. 46 (versus v. *dasyopogam* Ach. vergens).—*L. hirtus* = 2 specim. *Usneae barbatae* var. *dasyopogae* Ach.—77. = *Usn. barbata* var. *dasyopoga* (Ach.) lusus." This would seem to argue that *Lichen hirtus* had better be considered a synonym of *Usnea barbata* rather than of *Usnea florida* as I heretofore referred it. There is little doubt, however, that Linnaeus' diagnostic word "erectus," and the Dillenian figures referred to, place *Lichen hirtus* as a synonym of *Usnea florida* (or vice versa), a name after all given only to the varying sterile conditions of the latter plant.

*Deutschlands Flora 2: 133. 1795.

†*Patentissimis* of the *Flora Suecica* reads *patentibus* in *Species Plantarum*, 1753.

Whether the page priority of *hirtus* makes *floridus* rather a synonym of the former, reduces itself largely to the question of considering composite, uncited "types" of a pendulous character of greater value than the diagnoses and plate references. The page priority of *hirtus* over *floridus*, can, however, be waived on good grounds—first, perhaps, because of its composite representation already noted; secondly, because page priority was not accepted by the Brussels Congress; thirdly, because good sense allows and advises the holding (*nomina conservanda*) to names of long standing, this principle being eminently applicable here. In point of fact, among lichens no better case exists. Acharius in *Lichenographiae Suecicae Prodrum* of 1798 (224–5) combined them under *florida*. He writes:

"Hujus tantum varietas exscutellata est: *Lichen hirtus* Linn.," an absolutely true statement, and followed by an interesting explanation given below, the truth of which can be proved only by a long study of growing plants. The sterile plants, however, I believe rarely mature as described, their substrata and environs generally preventing a luxuriant development. "*L. hirtus* Linn. & Auct. a *L. florido* in eo tantum differt, quod ille junior pallidior, glomerulis frequenter adpersus, magis ramosus, longius fibrillosus atque sterilis; hic autem per aetatem fere nigricans, crassior, rigidior minusque ramosus sit, & scutellis amplis radiosius instruatur."

No. 79, *Lichen articulatus*, Wainio did not find represented in the Linnaean herbarium, except as heretofore referred to under *Lichen barbatus*. As, however, Linnaeus' 1753 diagnosis is characteristic, and the plate reference and the Dillenian plant are well known, there seems no reason to disturb our present position in the absence of a Linnaean "type" specimen, particularly as a comparison of the given "type" localities is also a most convincing argument.

No. 80, *Lichen floridus*, is represented in the Linnaean herbarium, as would be expected, by a specimen of the sort known to Tuckerman as "*Usnea barbata* a. *florida* Fr. This case is clear and needs no further comment, except to recognize the present position of *Usnea florida* (L.) Web. as a species, and to hold to the advantage of *nomina conservanda*.

We therefore have the Linnaean nomenclature of *Usnea* as follows:

Genus: USNEA (Dill.) Adans.

Type species (if we recognize such): USNEA PLICATA (L.) Web.

Species: USNEA PLICATA (L.) Web.

USNEA BARBATA (L.) Web. or USNEA PLICATA BARBATA
(L.) R. H. Howe, Jr.

USNEA ARTICULATA (L.) Hoffm.

USNEA FLORIDA (L.) Web.

Syn. *Lichen hirtus* L.

THOREAU MUSEUM,
CONCORD, MASS.